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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/525,185	03/14/2000	David F. Sorrells	1744.0450002	8068
7590 11/18/2004			EXAMINER	
Sterne Kessler Goldstein & Fox PLLC			ODOM, CURTIS B	
Suite 600			ART UNIT	
1100 New York Ave NW			PAPER NUMBER	
Washington, DC 20005-3934			2634	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/525,185	Applicant(s) SORRELLS ET AL.	
	Examiner Curtis B. Odom	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 8, 9 and 13-22 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 13-16 is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 8, 17, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Naden et al. (U. S. Patent No. 5, 999, 561).

Regarding claim 1, Naden et al. discloses a method for down-converting and de-spreading a received spread spectrum signal, comprising the steps of:

receiving (Fig. 35, column 48, lines 30-57) the spread spectrum signal having a center frequency that is above baseband; and

sampling (Fig. 35, blocks 3512 and 3522, column 48, lines 30-57) the received spread spectrum signal according to a control signal (quadrature downconversion despread signal) resulting in a de-spread baseband signal, wherein the control signal includes a spreading code corresponding to the received spread spectrum signal, the control signal having a center frequency that is selected so as to down-convert the received spread spectrum signal to baseband during the sampling step, wherein mixing the signal to downconvert the signal to the IF frequency samples the signal.

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Regarding claim 8, which inherits the limitations of claim 1, Naden et al. discloses the spreading code is a PN code (Fig. 35, block 3536, column 48, lines 30-57).

Regarding claim 17, which inherits the limitations of claim 1, Naden et al. discloses the center frequency of the control signal is approximately equal to the center frequency of the received spread spectrum signal (column 48, lines 30-57).

Regarding claim 20, which inherits the limitations of claim 1, Naden et al. discloses the following:

generating (Fig. 35, block 3532, column 48, lines 30-57) an oscillating signal having the center frequency that is determined to down-convert the received spread spectrum signal to baseband during the sampling step;

generating (Fig. 35, block 3536, column 48, lines 30-57) a spreading code; and modulating (Fig. 35, blocks 3540 and 3542, column 48, lines 30-57) the oscillating signal according to the spreading code, resulting in a spread oscillating signal

Regarding claim 21, Naden et al. discloses a method for down-converting and de-spreading a received spread spectrum signal, comprising the steps of:

receiving the spread spectrum signal having a center frequency that is above baseband;

generating (Fig. 3530, column 48, lines 30-57) a control signal having a center frequency that is selected to down-convert the received spread spectrum signal to baseband, and the control signal also including a spreading code corresponding to the received spread spectrum signal; and

sampling (Fig. 35, blocks 3512 and 3522, column 48, lines 30-57) the received spread spectrum signal according to the control signal so as to down-convert and de-

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spread the spread spectrum signal, wherein mixing the signal to downconvert the signal to the IF frequency samples the signal.

Regarding claim 22, which inherits the limitations of claim 21, Naden et al. discloses the sampling step includes the step of sampling the received spread spectrum signal according to the control signal so as to simultaneously down-convert and de-spread the spread spectrum signal (column 48, lines 30-57).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naden et al. (U. S. Patent No. 5, 999, 561).

Regarding claims 18 and 19, Naden et al. discloses all the limitations of claims 18 and 19 (see rejection of claim 1), except the control signal is a sub-harmonic or an offset from a sub-harmonic of the center frequency of the received spread spectrum signal. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made the center frequency could have been a sub-harmonic or an offset from a sub-harmonic of the center frequency of the received spread spectrum signal depending on the frequency the user specifies as the down-conversion (IF) frequency. Therefore, depending on the down-conversion frequency or the frequency the user wishes

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to process the signal, the control signal could have been a sub-harmonic or an offset from a sub-harmonic of the center frequency of the received spread spectrum signal. Changing the frequency of the control signal would not change the functionality of the device of Naden et al. Thus, claims 18 and 19 are deemed a design choice and do not constitute patentability.

Allowable Subject Matter

5. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 9 and 13-16 are allowable over prior art references because related references do not disclose creating a control signal which allows a sampling switch to simultaneously down-convert and despread a signal and create undersamples which are stored in a storage device, wherein successive undersamples form a despread baseband signal.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
November 12, 2004



STEPHEN CHIN
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